Evaluating the Results of ECR

ECR Performance Evaluation Discussion Group

Systematic Evaluation of Environmental and Economic Results (SEER)

October 12, 2006

U.S. Environmental Protection Agency
Conflict Prevention and Resolution Center

U.S. Department of Interior
Office of Collaborative Action and Dispute Resolution

Outline

- Introduction and overview
- Brief description of SEEER methods
- SEEER results
- Using SEEER

Acknowledgements

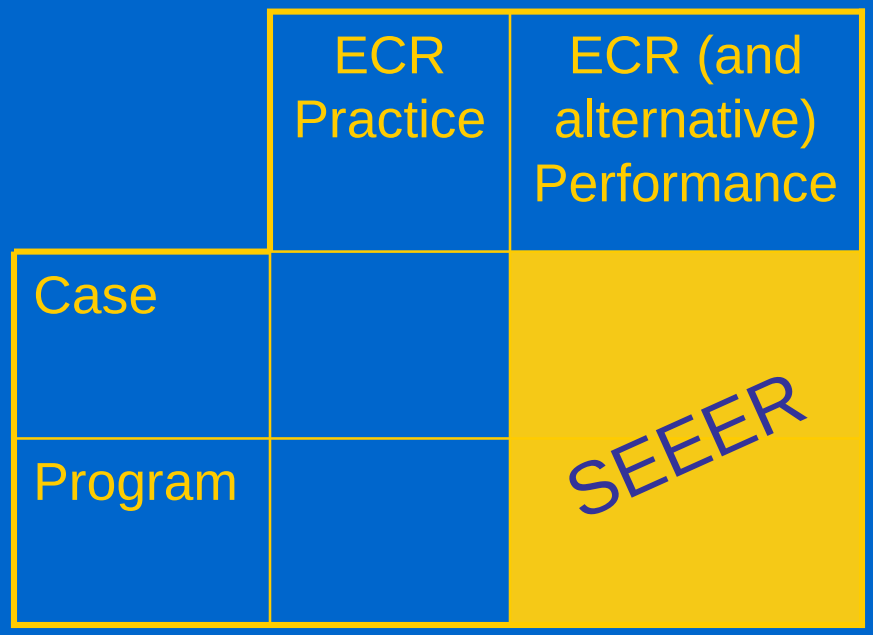
- Developers of SEEER methodology
  - Andy Rowe – GHK International
  - Bonnie Colby – University of Arizona
  - Mike Niemeyer – Oregon Department of Justice
  - Will Hall – EPA Conflict Prevention and Resolution Center
- ECR researchers, practitioners and parties
- Oregon State University expert panel and advisors

Seer vs. SEEER

- Seer - one who attempts to see the future
- SEEER - the Systematic Evaluation of Environmental and Economic Results

How Does SEEER Relate To Our Group Discussions?

- SEEER is focused on the primary concerns of ECR clients
  - Non-ECR program decision makers want to know whether ECR is likely to produce results that are at least as good as conventional decision making approaches
- SEEER has addressed the key methodological challenges in evaluating the results of ECR
  - Allowing us to compare ECR to other decision making approaches with adequate validity and reliability
- SEEER has been continuously improved based on peer feedback and will benefit again from your input today



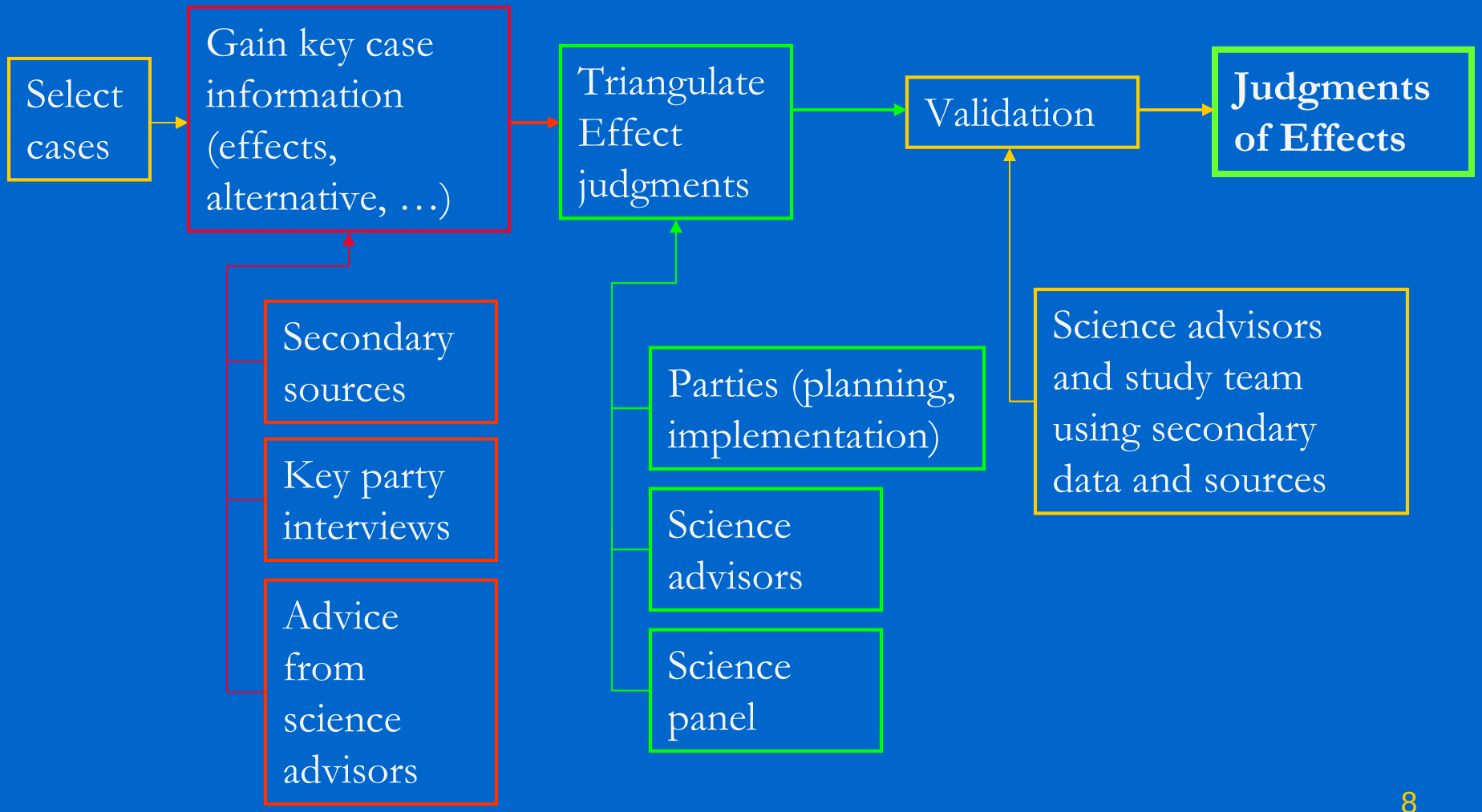
SEEER Overview

Performance Evaluation Objectives	SEEER
Compare ECR to alternative	Two approaches to determining the alternative
Attribute results to ECR and the alternative	Results attributed to the decision reached through ECR and the alternative
Apply to both policy and site-specific decisions	Adaptable to both types of cases
Estimate results over multiple time periods	Uses 10 and 60-year timeframes for environmental effects
Provide timely results without longitudinal research	Asks multiple sets of respondents to estimate future effects (similar to expert elicitation)
Produce valid and reliable results	Collects data from science experts and ECR participants, statistically checks validity and reliability
Feasible from a resource perspective	Cost is between $10K and $20 per case
Cover a range of environmental and natural resource issues	Environmental effects tailored to each type of case
Scalable from case level to program level	Application to representative sample of cases provides external validity for ECR and client programs

SEER Has Multiple Components

- Select Cases
- Gain Key Case Information
- Identify an Alternative
- Collect Information from Multiple Sources
- Analysis
- Reporting

What SEEER Does



SEER Findings to Date

- About SEEER
  - Results of ECR processes can be estimated despite complexity
  - Parties can provide valid and reliable judgments about the effects of ECR processes
- Effects of Environmental Decisions
  - ECR processes result in positive environmental outcomes
  - ECR processes are effective decision making processes

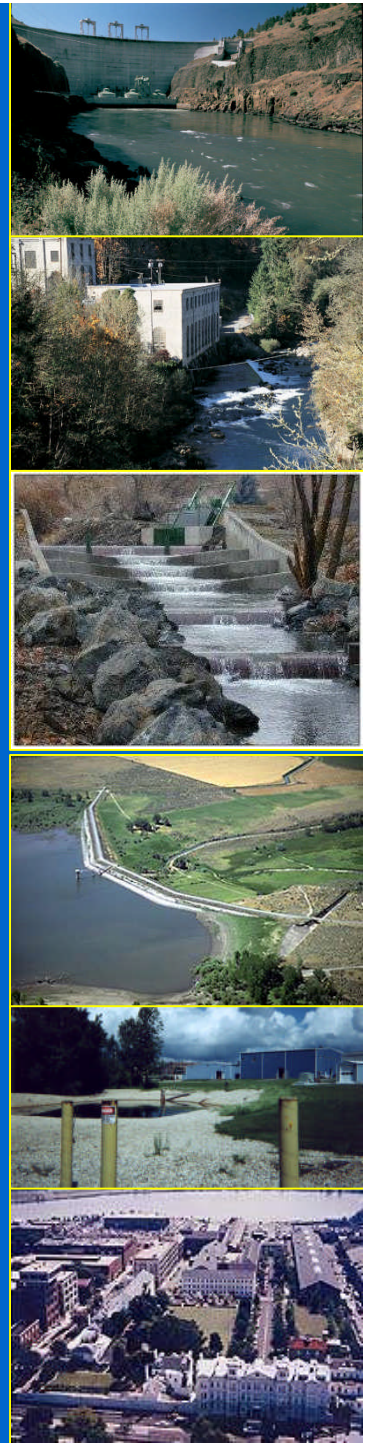
SEER Cases To Date

Oregon Cases

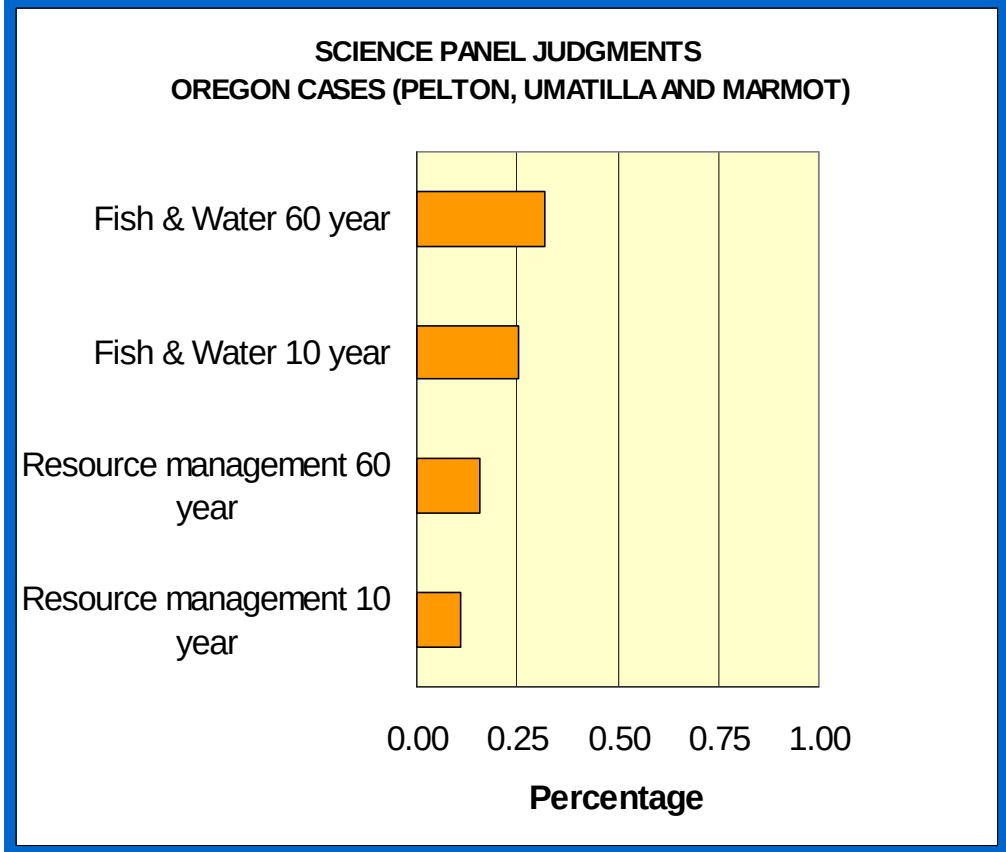
- Fish Passage Task Force (Policy)
- Marmot Bull Run Dam De-commissioning
- Pelton Round Butte Hydro Re-Licensing
- Mid Columbia Habitat Conservation Plan (not completed)
- Umatilla Basin Water Exchange
- Indian Ford Creek (Land Use / Conservation)

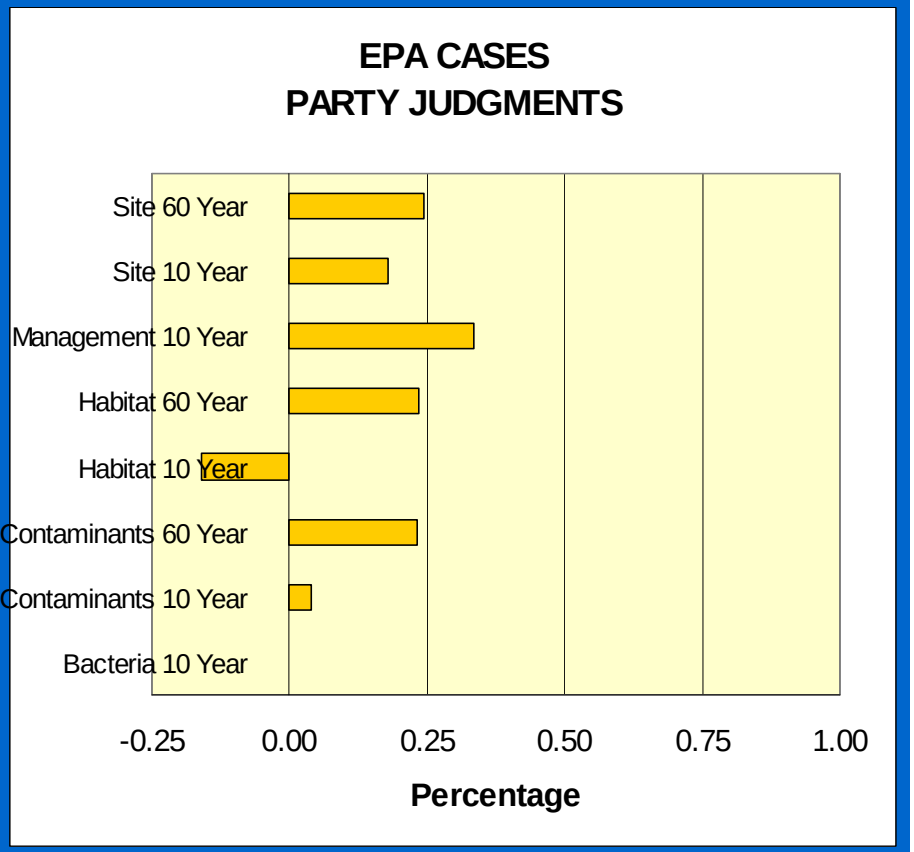
EPA Cases

- CSO Control Policy (Policy - ongoing)
- GE Pittsfield Superfund
- Philadelphia Prisons Enforcement
- Washington Navy Yard Permitting
- Washington Aqueduct Permitting



ECR Process Achieved Better Environmental Results





Value of Additional Fish From Using ECR Processes

Species	Per Fish Value Using Benefit Transfer Method	Umatilla	Pelton
		1993 – 2014 ($2004 M)	2011 – 2021 ($2004 M)
Steelhead Trout	$72	$3.96	$1.37
Spring Chinook	$104	$8.32	$1.98
Fall Chinook	$104	$12.48	$4.47
Coho	$104	$6.24	$62.9
Total		$31.00	$70.72

LESS TIME TO REACH AND IMPLEMENT A DECISION

	Superfund	Permitting		Enforcement
	GE Pittsfield	Washington Navy Yard	Washington Aqueduct	Philadelphia Prisons
Change in hours per week	-27	-56	-41	5
Number of weeks over which savings occur	78	13	13	13
Estimated hours saved per week	-2106	-728	-533	65
Estimated value of time saved	($133,731)	($46,228)	($33,846)	$4,128

Gains in Environmental Management

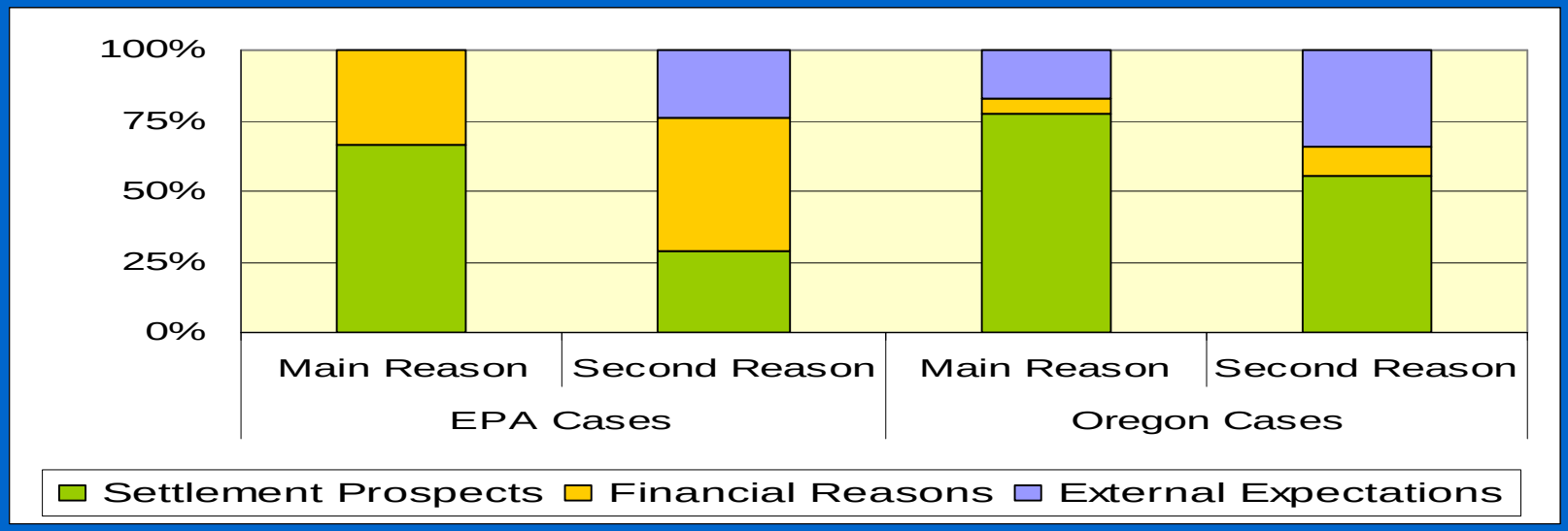
Effect	Oregon cases 0=totally disagree, 10=totally agree
Environmental stewardship more of a priority	7.09
Better information about environmental conditions	7.16
Stronger environmental management tools	6.78
Strengthened focus on actions with the greatest impact	7.09
Now clear who has management authority on these issues	6.30

- Have now enhanced questions to better match enforcement and permitting settings

Effectiveness

- Lower input costs
  - Savings from reaching agreement sooner = approximately 0.5 to 1.5 PY ($33,000 to $134,000 per case on EPA cases)
  - Additional savings in process costs will be included in future effects cases
- Stronger benefits
  - Enhanced environmental effects – about 25% better
  - Gains in environmental management – 35 - 50% better for EPA and Oregon cases respectively
  - Gains in organizational effectiveness through significant improvement in social capital, morale, public image and more harmonious post-agreement relations
  - More durable agreements = less likely to incur significant future expenditures
- Currently obtain most information for summary measures such as Return on Investment
  - Reviewing SEEER to generate RoI or similar measures

Reasons For ECR Process



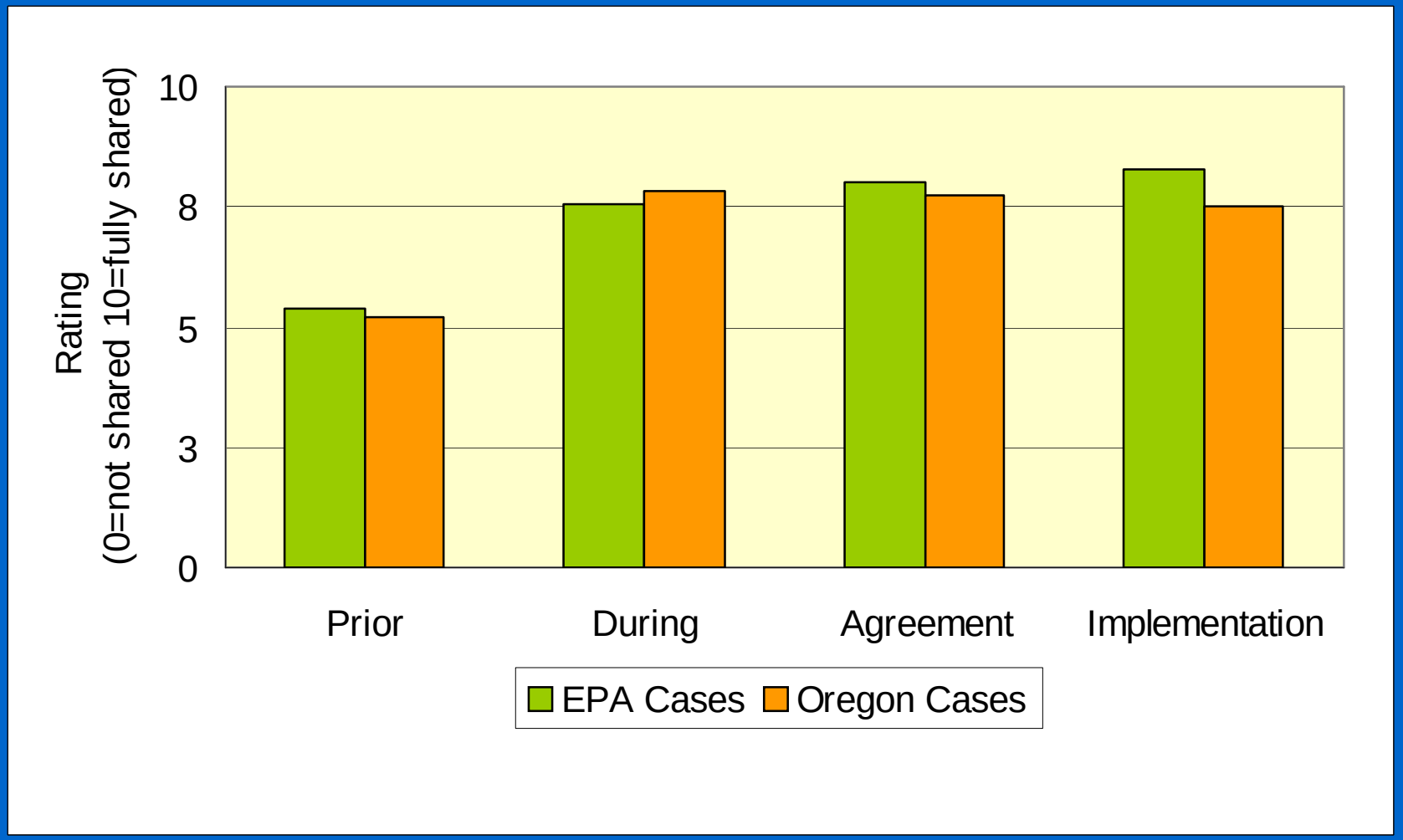
- EPA cases triggered by a regulatory issue
  - External expectations far less important for EPA cases
  - Settlement less of an issue for EPA cases, likely because EPA has permitting and enforcement authority
- Parties to EPA cases viewed the potential financial benefits of ECR processes much more importantly than parties to the Oregon cases

Benefits and Use of Social Capital

Effects of Social Capital	Oregon	EPA
Our organization benefits directly	7.2	9.4
Can address environmental issues more quickly		8.8
Enhances effectiveness of my organization	6.8	8.4
Better address environmental issues	7.3	8.2
Lower risk of negative outcomes	7.1	8.1
Better forecast likely outcomes	6.7	8.0
Enhances my effectiveness within my organization	7.4	7.8
Organizations less likely to take advesarial positions	6.9	7.8
Reduces uncertainity	7.2	7.7

scale (0=totally disagree, 10=fully agree)

ECR Decision Making Improves Information Sharing



Using SEEER

- SEEER is feasible
  - Judgments are being made starting from six months following a decision and up to ten years later
  - Costs of evaluating a decision $10 - $20K depending on costs of science panel and advisors
  - Much of the information is in the public domain
  - No difficulties obtaining responses from parties or participation of appropriate experts
- Our Next Steps
  - Final report on the Hewlett Foundation portion of the project
  - Completion of initial set of EPA cases and preparation of a final report
  - Completion of the initial set of DOI cases
  - Application of the SEEER methodology to a set of 13 ECR and non-ECR Superfund cases

END

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Further Information

- Examples of alternatives used in SEEER cases

Identifying Alternatives

- SEER applies new approaches to:
  - Identifying credible alternatives essential for evaluation
- SEER uses these alternatives to:
  - Compare the environmental effects of ECR decisions to those likely under a reasonable alternative decision, and
  - Judge the effectiveness of ECR processed relative to a reasonable alternative
- Keep in mind that we are comparing decisions to decisions; the decisions may result from *different* decision making processes

Examples of Natural Alternatives

- Off Road Vehicle Use in National Seashores
  - ORV use was closed in 1992 for the lower portion of the shore at Cape Cod National Seashore where the key issue was managing the effect of ORV on Piping Plover, a listed endangered species
  - We can get the incremental effects comparing closed and open areas (key to economic valuation)
- Licensing a hydro dam
  - Similar dam licensing decision in a similar setting with similar issues and affected interests and environmental effects, but through traditional FERC processes without collaboration

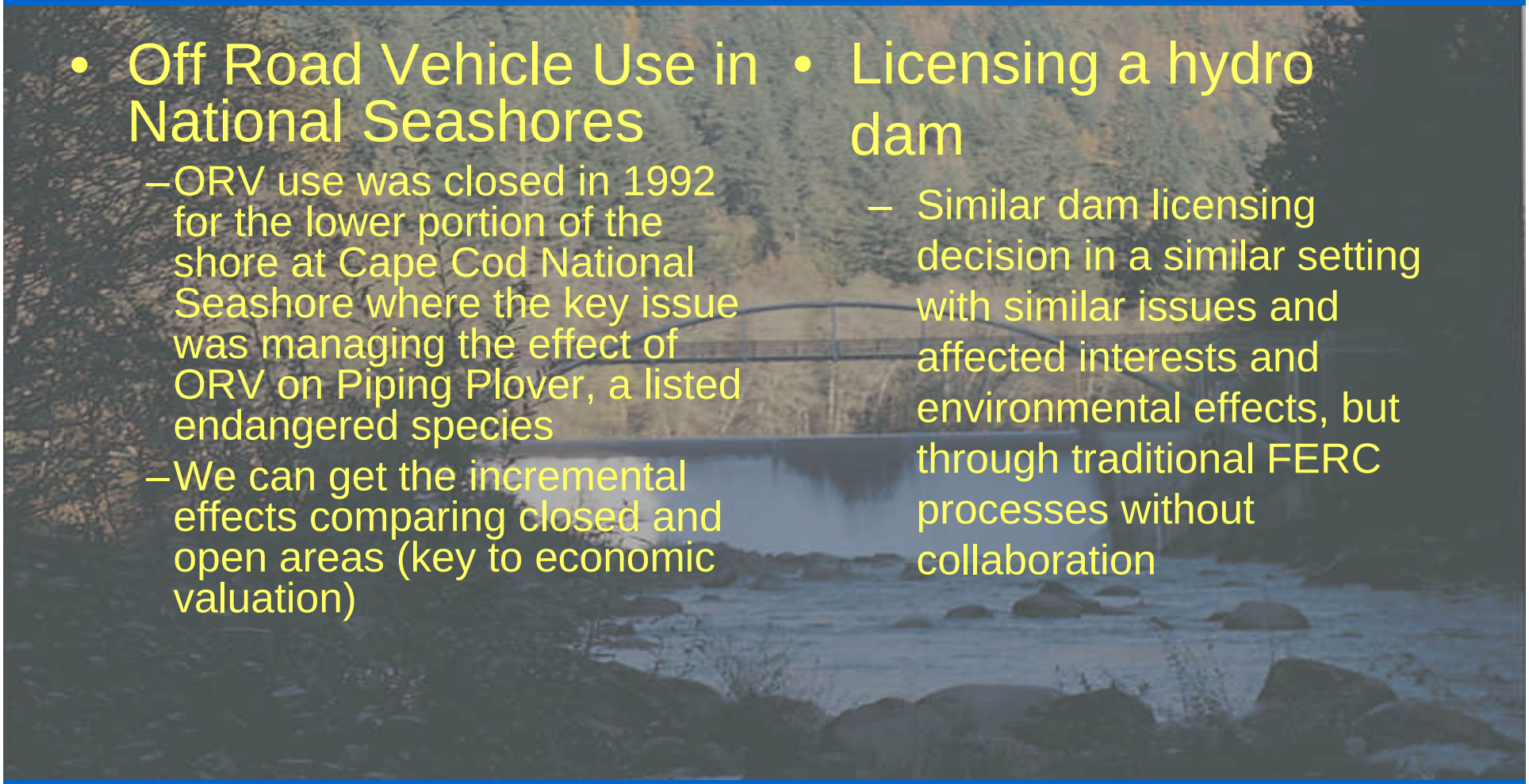
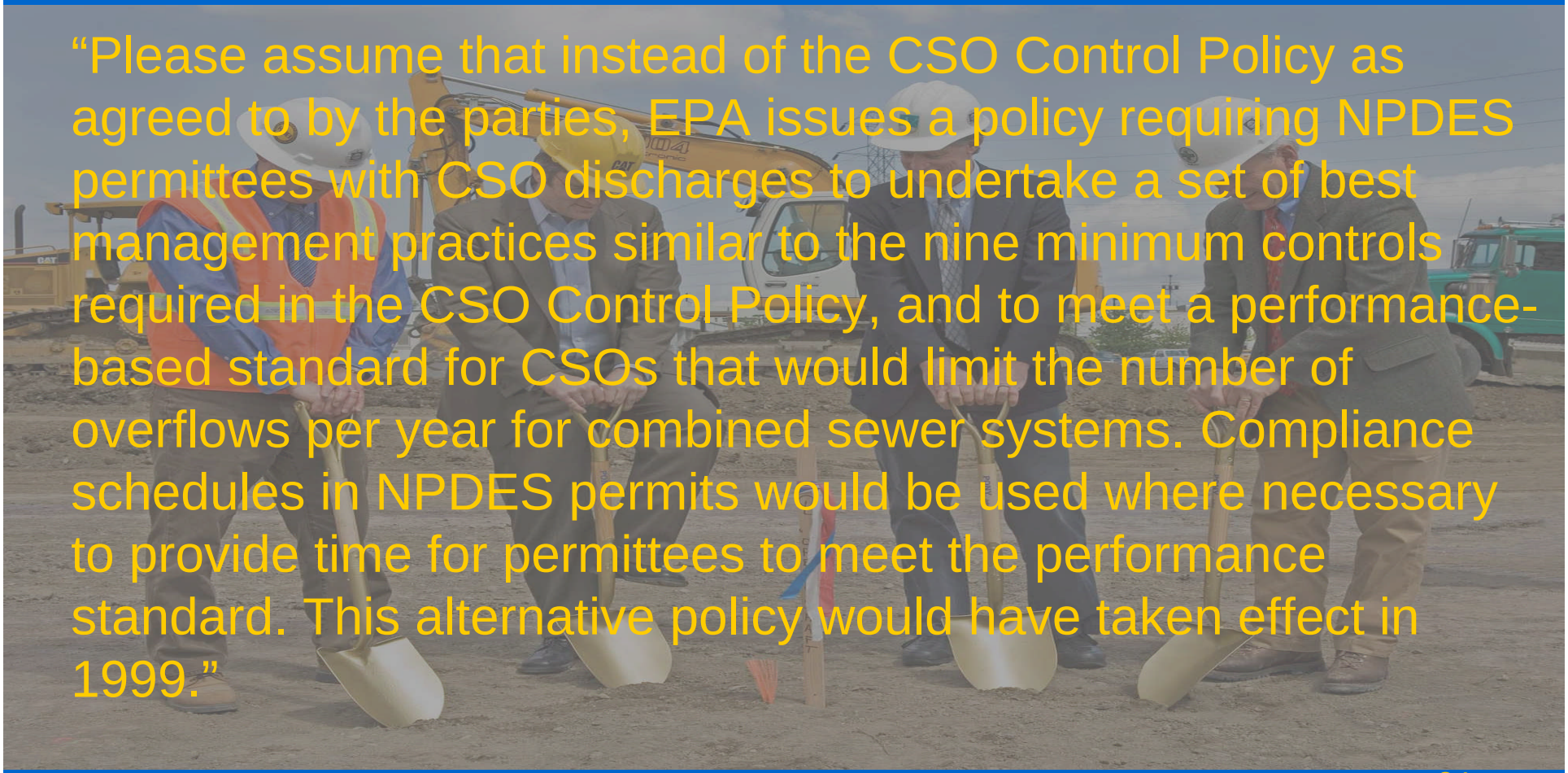


Photo : Footbridge Over the Marmot Dam (PGE)

Combined Sewer Overflows Policy – Constructed Counterfactual



"Please assume that instead of the CSO Control Policy as agreed to by the parties, EPA issues a policy requiring NPDES permittees with CSO discharges to undertake a set of best management practices similar to the nine minimum controls required in the CSO Control Policy, and to meet a performance-based standard for CSOs that would limit the number of overflows per year for combined sewer systems. Compliance schedules in NPDES permits would be used where necessary to provide time for permittees to meet the performance standard. This alternative policy would have taken effect in 1999."

Reliable Judgments Unlikely Using Party Nominated Alternatives

- Constructed alternative – traditional FERC process, took 5 years longer, involved litigation and did not include transfers of benefits such as utility owned land and senior water rights
- Oregon FERC Case A
  - The environmental groups selected a range of alternatives including traditional FERC process, working directly with the utility, working with a government agency other than FERC and litigation.
  - Businesses and federal agencies were split between working with the traditional FERC process and working directly with the utility
  - State and local government selected traditional FERC process, working directly with the utility and working with some other agency
- Oregon FERC Case B
  - The environmental groups selected working with several agencies, within the FERC process and litigation
  - State agencies would work with the utility, with another government agency other than FERC, the state HART process and the traditional FERC process.
- Party nominated alternatives usually reflect their choice of how to proceed when the choice of forum and process are largely controlled by others